

## Case Report

# Wheezy adult with chicken bone in the chest

**Bhavana Venkata Nagabhushana Rao<sup>1\*</sup>, Narmada Vatti<sup>2</sup>, Balaraju Tadikonda<sup>3</sup>,  
Srinivasa Perraju Ponnappalli<sup>4</sup>,**

<sup>1</sup>Department of Medicine, Queen's NRI Hospital, Visakhapatnam, Andhra Pradesh, India

<sup>2</sup>Department of ENT, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India

<sup>3</sup>Pulmonologist, Gayatri Hospital, Visakhapatnam, Andhra Pradesh, India

<sup>4</sup>Radiologist, Vijaya Medical Center, Visakhapatnam, Andhra Pradesh, India

**Received:** 10 October 2018

**Accepted:** 15 November 2018

### \*Correspondence:

Dr. Bhavana Venkata Nagabhushana Rao,

E-mail: bhavanavnrao@gmail.com

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ABSTRACT

A large foreign body aspiration in a healthy adult is rare in the literature. It is a frequent problem in children and adolescents. Adults are affected in altered sensorium, either due to sedation or neurological problems. Acute upper airway obstruction though rare in adults requires establishment of an airway using Laryngoscope or rigid bronchoscope. At times we have to recourse to tracheostomy to save the life. Foreign body often travels down the right sided airways, here we present a case of 30mm Chicken bone being lodged in the left main bronchus. The patient presented with unremitting cough and normal chest skiagram. Monophonic wheeze on auscultation and focused attention on the patient narration made us clinch the diagnosis. New onset wheezy chest or unremitting chronic airway disease on adequate therapy, with history of choking needs special attention. The CT scan is a better modality of the investigation. Three dimensional CT with multi-slice virtual bronchoscopy is advantageous. We discussed foreign body aspirations in adults, the various causes and presentations. Fiber optic bronchoscopy is the ideal method for visualization and extraction of non-life-threatening foreign bodies in adults. Once a foreign body is identified, it has to be removed as early as possible. Retained foreign bodies can precipitate many complications related to infection and inflammation. At rare incidence we may have to resort to thoracotomy to remove a complicated foreign body.

**Keywords:** Adult asthma, Bronchial tree, Foreign body, Monophonic wheeze

### INTRODUCTION

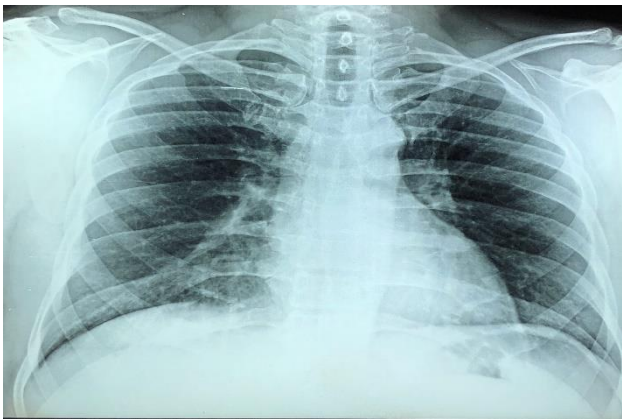
Foreign body aspiration is a common problem in children. Only 20 percent of cases occur in persons aged above 15 years.<sup>1</sup> Elderly people, people with neurological disorders, with altered sensorium or under sedation or effect of alcohol are the usual victims. In the adult, acute presentation of asphyxiation due to upper airway obstruction is a rarity. It is often due to distal obstruction of airways due to wedging. A cough is a frequent symptom and may also present as fever, haemoptysis, chest pain or wheeze. In those presenting with acute

asphyxiation treatment of airway obstruction and respiratory failure is a priority. Laryngoscopic examination of oropharynx should be done to retrieve a glottic or a subglottic foreign body. The Rigid bronchoscopy is a choice of the procedure if a foreign body is suspected in the trachea or major bronchi. If a non-life-threatening foreign body is suspected flexible bronchoscope can be used, albeit in a place equipped with resuscitation and airway management facilities. Accessibility of thoracic surgeon and a rigid bronchoscopy a must in the event of more serious obstruction and bleeding.

Once the foreign body in the airway is evident it should be removed as early as possible to prevent mucosal inflammation and formation of granulation tissue. Anti-inflammatory drugs and steroids are not routinely administered to patients with a foreign body. Occasionally a short course of glucocorticoid is administered when extraction is difficult due to granulation tissue or bronchospasm. Antibiotics are indicated in documented respiratory infection.

### CASE REPORT

Forty-seven years male patient consulted me for unremitting cough of two-month duration. He never had prolonged respiratory symptoms. Nor had any history of respiratory allergies. He is a businessman and is not exposed to dust at work or at home. He doesn't keep pet animals or birds at home. Never been to caves, nor on exotic journeys in the past. He is not a hypertensive or diabetic and didn't have a major illness in the past. All his symptoms started after a chicken meal at a restaurant. He felt choked while negotiating a large chicken piece and violently coughed it out. Since then he has been suffering from a cough at night. It gradually increased in severity and persistent even in the daytime. He consulted his family physician who gave him a course of antibiotic. As his symptoms aren't remitting, he consulted a pulmonologist. Haematological investigations and chest x-ray were done (Figure 1).



**Figure 1: Chest X-ray-foreign body not visualized.**

Haematological tests were normal and skiagram did not show any abnormality. As the Pulmonologist heard wheeze on auscultation, he was diagnosed to have adult onset Bronchial Asthma. He was given another course of antibiotics and a bronchodilator. He didn't get any relief, hence he came to our hospital. He was a well built happy going guy. His structured musculature suggestive of bodybuilding activity. He narrated all his history in between episodes of cough. He told his cough increases when he is supine. Felt that his cough comes from the left side of his chest. On auscultation, we heard bilateral rhonchi. We also heard a monophasic wheeze in left mammary and infraclavicular areas. In the view of the

history of choking while eating, persistent cough and a monophasic wheeze on auscultation we asked for contrast enhanced CT scan of the chest to exclude an aspiration. To our surprise CT Scan showed an obliquely placed large linear radiodense foreign body at the left main bronchus (Figure 2).



**Figure 2: C.T. scan chest showing chicken bone in the left main bronchus.**



**Figure 3: Bronchoscopic view of the chicken bone in the left main bronchus.**



**Figure 4: Extracted chicken bone measuring 30mm.**

He was referred to a Bronchoscopist. He found a bone piece in the left main bronchus (Figure 3). He could extract with the Fiber Optic bronchoscope. It was a 30mm chicken bone (Figure 4). The patient recovered well and his cough subsided.

## DISCUSSION

We describe a patient in his fifth decade with the significant foreign body aspiration, though many observational studies report the low incident in the adult patients.<sup>2</sup> Death from foreign body peaks in children under 1 year and in adults above 75. A Cafe coronary syndrome is a rare condition where fatal or near-fatal aspiration of incompletely chewed mutton piece occurs in elderly with dentition or swallowing disorders. Other risk factors in adult include altered sensorium due to head injury or cerebrovascular accident, drug or alcohol intoxication, or anaesthesia.<sup>3</sup> Symptomatology in FBA (Foreign Body Aspiration) depend upon the location of obstruction and degree of obstruction. In an adult clinical presentation FBA is often subtle or silent.<sup>4</sup> As in our patient, chronic cough is the most common presentation. Other symptoms include fever, chest pain and haemoptysis. Rarely, adult presents with asphyxiation due to the upper airway obstruction. Serious long-term complications of FBA include recurrent pneumonia, atelectasis, bronchial stenosis, bronchiectasis, lung abscess, empyema, pneumothorax and pneumomediastinum. Sometime history of aspiration may not be disclosed and forgotten. Dyspnea is a rarer complaint, only one study reported that 25 % of bronchoscopically proven FBA patients complained of dyspnea.<sup>5</sup>

Physical examination may not give a clue unless we happen to hear a monophonic wheeze as in our patient. Though it is not pathognomonic. A high index of suspicion is necessary, especially if the patient is presenting with atypical asthma or chronic obstructive airway disease and not responding to intensive treatment.

Findings on imaging depend upon the location and nature of the foreign body. Most of them are radiolucent and may not be visible on plain radiographs.<sup>6</sup> CT Scan or three-dimensional multi-slice virtual bronchoscopy may enhance the detection of the foreign body.<sup>7</sup> In contrast to our patient who had a left main bronchus foreign body, they have a tendency to travel to right.

It is essential to establish and maintain the airway in those with acute respiratory distress. Removal of the foreign body either by laryngoscope or rigid Bronchoscope depending on the location may be life-saving. If ventilation is unsuccessful and foreign body is above the vocal cord, emergency tracheostomy may be required. Some expert advocate endotracheal tube

placement using standard ETT with cuff deflated and stylet in place and attempt to push the foreign body down the right main bronchus which can be dealt later on.<sup>8</sup> In patients with a non-life-threatening aspiration, flexible bronchoscopy is the procedure of choice. In most cases, foreign bodies can be extracted using a modern flexible bronchoscope.<sup>9</sup> In unusual situations, a thoracotomy may be required to remove a foreign body.<sup>10</sup>

## CONCLUSION

Adult presenting with the first episode wheeze who has a history of choking needs special attention. Especially if not responding to therapy. Three-dimensional CT scan gives a better clue to the foreign body. Non-life-threatening foreign bodies can safely be dealt with fiber-optic bronchoscopy by an experienced Bronchoscopist.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

## REFERENCES

1. National Safety Council. Report on injuries. Injury Facts, 2011. Available at: [www.nsc.org/library/report\\_injury\\_usa.html](http://www.nsc.org/library/report_injury_usa.html).
2. Limper AH, Prakash UB. Tracheobronchial foreign bodies in adults. *Ann Intern Med.* 1990;112(8):604.
3. Boyd M, Chatterjee A, Chiles C, Chin R Jr. Tracheobronchial foreign body aspiration in adults. *South Med J.* 2009 Feb;102(2):171-4.
4. Rafanan AL, Mehta AC. Adult airway foreign body removal. What's new?. *Clin Chest Med.* 2001;22(2):319.
5. Lan RS. Non-asphyxiating tracheobronchial foreign bodies in adults. *Eur Respir J.* 1994;7(3):510.
6. Zissin R, Shapiro-Feinberg M, Rozenman J, Apter S, Smorjik J, Hertz M. CT findings of the chest in adults with aspirated foreign bodies. *Eur Radiol.* 2001;11(4):606.
7. Tong B, Zhang L, Fang R, Sha Y, Chi F. 3D images based on MDCT in evaluation of patients with suspected foreign body aspiration. *Eur Arch Otorhinolaryngol.* 2013 Mar;270(3):1001-7.
8. Walls, Ron M, Murphy, F. Foreign body in the adult airway. In: *Manual of Emergency Airway Management*, Fourth Ed., Wolters kluwer/Lippicott Williams and Wilkins, Philadelphia; 2008:419-423.
9. Mehta AC, Rafanan AL. Extraction of airway foreign body in adults. *J Bronchol.* 2001;8:123.
10. Ndiaye M, Deguenonvo REA, Thiam NF, Nao EEM, Dieng PA Thoracotomy for bronchial foreign bodies: a propos of 3 cases. *J Otol Rhinol.* 2016;5:1.

**Cite this article as:** Nagabhushana Rao BV, Vatti N, Tadikonda B, Ponnappalli SP. Wheezy adult with chicken bone in the chest. *Int J Res Med Sci* 2019;7:310-2.